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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,683	12/13/2000	Elie.Quzi Koskas	28944/36991	7938

4743 7590 04/30/2004

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EXAMINER

LEROUX, ETIENNE PIERRE

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 04/30/2004

11

Please find below and/or attached an Office communication concerning this application or proceeding.

8

# Office Action Summary

Application No.

09/736,683

Applicant(s)

KOSKAS, ELIE QUZI

Examiner

Etienne P LeRoux

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 31-72 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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***Response to Election with Traverse***

Applicant's election of claims 1-30, with traverse, as of 10/3/2003 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that there is no serious burden on the Examiner if restriction is not made. This is not found persuasive because instant Office Action which concerns claims 1-30 comprises 21 pages.

The requirement is still deemed proper and is therefore made FINAL.

***Specification:***

The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-30 of the claimed invention are directed to non-statutory subject matter.

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MPEP § 2106 states:

There is always some form of physical transformation within a computer because a computer acts on signals and transforms them during its operation and changes the state of its components during the execution of a process. Even though such a physical transformation occurs within a computer, such activity is not determinative of whether the process is statutory because such transformation alone does not distinguish a statutory computer process from a nonstatutory computer process. What is determinative is not how the computer performs the process, but what the computer does to achieve a practical application. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

In instant invention, the dividing of an input list into subsets per claims 1 and 11 is not achieved by computer executable code stored on computer readable media. This step is presumably done manually by one of ordinary skill in the art. The claims are nonstatutory because technology is not used during execution of the process.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 9, 11, 12, 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pat No 6,067,540 issued to Ozbutun et al (hereafter Ozbutun).

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Claim 1:

Ozbutun discloses dividing a range covering integers of an input list [Fig 3a] into subsets according to a predetermined pattern [Fig 3b]; and producing coding data including, for each subset containing at least one integer of the input list, data representing the position of said subset in the pattern, and data representing the position of each integer of the input list within said subset [Fig 2, 202, col 5, lines 6-20].

Claim 2:

Ozbutun discloses wherein the data representing the position of each integer of the input list within a subset consist of a bitmap segment in which each bit is associated with a respective integer of the subset to indicate whether said integer belongs to the input list [Fig 3b].

Claim 3:

Ozbutun discloses wherein the position of each subset in the pattern is represented by an integer rank which is included in the coding data, in association with the corresponding bitmap segment, if said subset contains at least one integer of the input list [Fig 3b].

Claims 9 and 12:

Ozbutun discloses wherein the subsets are consecutive intervals consisting of the same number of integers [col 5, line 47].

Claim 11:

Ozbutun discloses a method of encoding integer lists in a computer system, comprising n successive coding layers, n being a number at least equal to 1, wherein each coding layer [Fig 3b,

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304] comprises the steps of dividing a range [Fig 3a] covering integers of an input list of said layer into subsets according to a predetermined pattern [Fig 3b, 304, 306, 308]; producing coding data including, for each subset containing at least one integer of the input list, data representing the position of each integer of the input list within said subset and, at least if said layer is the last coding layer, data representing the position of said subset in the pattern; if said layer is not the last coding layer, forming a further integer list representing the position, in the pattern of said layer, of each subset containing at least one integer of the input list, and providing said further integer list as an input list of the next layer [Figs 3a, 3b, col 5, lines 5-20, col 5, lines 58-65].

Claim 16:

Ozbutun discloses wherein the coding data produced from one integer list input in the first layer are stored as at least one record chain in a data container allocated to a plurality of integer lists [Fig 3b, 304, 306, 308].

Claim 17:

Ozbutun discloses the step of grouping the records of the data container so that the record of each chain have contiguous addresses [Fig 3b].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 4, 6, 18, 20, 21, 23, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozbutun.

Claim 4:

Ozbutun discloses the elements of claims 1-3 as noted above.

Ozbutun fails to disclose wherein a coding data container comprising records having respective addresses is provided for storing together coding data produced from a plurality of integer lists, wherein each record of the coding data container includes a first field for storing an integer rank related to the pattern, a second field for storing an address value and a third field for storing a bitmap segment, and wherein the encoding of a non-empty input list comprises the steps of: a) selecting an available record of the coding data container; b) selecting a subset containing at least one integer of the input list to which no record has been allocated; c) allocating the selected record to the selected subset; d) storing the rank and the bitmap segment of the coding data produced for the selected subset in the first and third fields of the selected record, respectively; e) if every subset containing at least one integer of the input list has a record allocated thereto, storing an end value in the second field of the selected record; and f) if at least one subset containing at least one integer of the input list has no record allocated thereto, storing the address of an available record of the coding data container in the second field of the selected record, selecting said available record and repeating from step b).

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Figs 3a, 3b]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ozbutun to include wherein a coding data container comprising records

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having respective addresses is provided for storing together coding data produced from a plurality of integer lists, wherein each record of the coding data container includes a first field for storing an integer rank related to the pattern, a second field for storing an address value and a third field for storing a bitmap segment, and wherein the encoding of a non-empty input list comprises the steps of: a) selecting an available record of the coding data container; b) selecting a subset containing at least one integer of the input list to which no record has been allocated; c) allocating the selected record to the selected subset; d) storing the rank and the bitmap segment of the coding data produced for the selected subset in the first and third fields of the selected record, respectively; e) if every subset containing at least one integer of the input list has a record allocated thereto, storing an end value in the second field of the selected record; and f) if at least one subset containing at least one integer of the input list has no record allocated thereto, storing the address of an available record of the coding data container in the second field of the selected record, selecting said available record and repeating from step b).

The ordinarily skilled artisan would have been motivated to modify Ozbutun per the above for the purpose of creating segmented bitmaps to reduce consumption of database system resources [col 3, lines 23-30].

Claim 6:

Ozbutun discloses the elements of claims 1-4 as noted above.

Ozbutun discloses further comprising the step of grouping the records stored in the data container, so that the records allocated to the subsets for any encoded integer list have contiguous addresses [Fig 3b].



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Claim 18:

Ozbutun discloses the elements of claim 11 as noted above.

Ozbutun fails to disclose wherein  $n > 2$  and layer  $k$  data containers each having a plurality of records are provided in a computer memory for  $1 < k < n$ , each record of a layer  $k$  data container being associated with a layer  $k$  integer rank representing the position of a subset in the layer  $k$  pattern, and wherein each record of a layer  $k$  data container associated with a layer  $k$  rank representing the position of a subset in the layer  $k$  pattern has a first field for containing data for retrieving the position within said subset of any integer of a layer  $k$  input list relating to a layer 1 input list, whereby a combination of said layer  $k$  rank with any position retrievable from the data contained in said first field determines a layer  $k-1$  rank with which a respective record of the layer  $k-1$  data container is associated if  $k > 1$ , and an integer of said layer 1 input list if  $k = 1$ .

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ozbutun to include wherein  $n > 2$  and layer  $k$  data containers each having a plurality of records are provided in a computer memory for  $1 < k < n$ , each record of a layer  $k$  data container being associated with a layer  $k$  integer rank representing the position of a subset in the layer  $k$  pattern, and wherein each record of a layer  $k$  data container associated with a layer  $k$  rank representing the position of a subset in the layer  $k$  pattern has a first field for containing data for retrieving the position within said subset of any integer of a layer  $k$  input list relating to a layer 1 input list, whereby a combination of said layer  $k$  rank with any position retrievable from the data

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contained in said first field determines a layer  $k-1$  rank with which a respective record of the layer  $k-1$  data container is associated if  $k>1$ , and an integer of said layer 1 input list if  $k=1$ .

The ordinarily skilled artisan would have been motivated to modify Ozbutun per the above for the purpose of creating segmented bitmaps to reduce consumption of database system resources [col 3, lines 23-30]

Claim 20:

Ozbutun discloses the elements of claims 11 and 18 as noted above.

Ozbutun fails to disclose wherein, for  $1 < k < n$ , said data contained in the first field of a record of the layer  $k$  data container for retrieving the position of any integer of a layer  $k$  input list within a subset comprise a bitmap segment in which each bit is associated with a respective integer of said subset to indicate whether said integer belongs to said layer  $k$  input list.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ozbutun to include wherein, for  $1 < k < n$ , said data contained in the first field of a record of the layer  $k$  data container for retrieving the position of any integer of a layer  $k$  input list within a subset comprise a bitmap segment in which each bit is associated with a respective integer of said subset to indicate whether said integer belongs to said layer  $k$  input list.

The ordinarily skilled artisan would have been motivated to modify Ozbutun per the above for the purpose of creating segmented bitmaps to reduce consumption of database system resources [col 3, lines 23-30].

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Claim 21:

Ozbutun discloses the elements of claims 11, 18 and 20 as noted above.

Ozbutun fails to disclose wherein, for  $1 < k < n$ , each record of the layer k data container associated with a layer k rank further has a second field for containing said layer k rank.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ozbutun to include wherein, for  $1 < k < n$ , each record of the layer k data container associated with a layer k rank further has a second field for containing said layer k rank.

The ordinarily skilled artisan would have been motivated to modify Ozbutun per the above for the purpose of creating segmented bitmaps to reduce consumption of database system resources [col 3, lines 23-30].

Claim 23:

Ozbutun discloses the elements of claims 11 and 18 as noted above.

Ozbutun fails to disclose wherein, for  $1 < k < n$ , each record of the layer k data container further has a second field for containing a number representing the position of an integer of a layer k+1 input list within a subset of the layer k+1 pattern, and wherein, for  $1 < k < n$ , said data contained in the first field of a record of the layer k data container associated with a layer k rank for retrieving the position of any integer of a layer k input list within a subset of the layer k pattern comprise a pointer to at least one record of the layer k-1 data container in which the second field contains a number representing the position of an integer of said layer k input list

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within said subset of the layer k pattern, whereby said record of the layer k-1 data container is associated with the layer k-1 rank determined by the combination of said layer k rank with the position represented by said number.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ozbutun to include wherein, for  $1 < k < n$ , each record of the layer k data container further has a second field for containing a number representing the position of an integer of a layer k+1 input list within a subset of the layer k+1 pattern, and wherein, for  $1 < k < n$ , said data contained in the first field of a record of the layer k data container associated with a layer k rank for retrieving the position of any integer of a layer k input list within a subset of the layer k pattern comprise a pointer to at least one record of the layer k-1 data container in which the second field contains a number representing the position of an integer of said layer k input list within said subset of the layer k pattern, whereby said record of the layer k-1 data container is associated with the layer k-1 rank determined by the combination of said layer k rank with the position represented by said number.

The ordinarily skilled artisan would have been motivated to modify Ozbutun per the above for the purpose of creating segmented bitmaps to reduce consumption of database system resources [col 3, lines 23-30].

Claim 24:

Ozbutun discloses the elements of claims 11, 18 and 23 as noted above.

Ozbutun fails to disclose wherein said data contained in the first field of a record of the layer 1 data container for retrieving the position of any integer of a layer 1 input list within a subset comprise a bitmap segment in which each bit is associated with a respective integer of said subset to indicate whether said integer belongs to said layer 1 input list.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ozbutun to include wherein said data contained in the first field of a record of the layer 1 data container for retrieving the position of any integer of a layer 1 input list within a subset comprise a bitmap segment in which each bit is associated with a respective integer of said subset to indicate whether said integer belongs to said layer 1 input list.

The ordinarily skilled artisan would have been motivated to modify Ozbutun per the above for the purpose of creating segmented bitmaps to reduce consumption of database system resources [col 3, lines 23-30].

Claim 26:

Ozbutun discloses the elements of claims 11 and 18 as noted above.

Ozbutun fails to disclose wherein, for  $1 < k < n$ , each record of the layer k data container further has a next address field, whereby record chains are defined in the layer k data container by means of the next address fields, and wherein at least some of the layer 1 input lists are respectively associated with record chains in the layer n data container, whereby the coding data

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for layer n relating to one of said layer 1 input lists are stored in or retrievable from the record chain associated therewith in the layer n data container.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ozbutun to include wherein, for  $1 < k < n$ , each record of the layer k data container further has a next address field, whereby record chains are defined in the layer k data container by means of the next address fields, and wherein at least some of the layer 1 input lists are respectively associated with record chains in the layer n data container, whereby the coding data for layer n relating to one of said layer 1 input lists are stored in or retrievable from the record chain associated therewith in the layer n data container.

The ordinarily skilled artisan would have been motivated to modify Ozbutun per the above for the purpose of creating segmented bitmaps to reduce consumption of database system resources [col 3, lines 23-30].

Claims 5, 7, 8, 14, 15, 19, 22, 25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozbutun in view of US Pat No 5,995,098 issued to Okada et al (hereafter Okada), as best examiner is able to ascertain.

Claim 5:

Ozbutun discloses the elements of claims 1-4 as noted above

Ozbutun fails to disclose wherein the coding data container has a first file comprising the first and second fields of the records and a second file comprising the third fields of the records, the first and second files being accessible separately.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

Okada discloses assigning bitmap data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to obtain wherein the coding data container has a first file comprising the first and second fields of the records and a second file comprising the third fields of the records, the first and second files being accessible separately.

The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of controlling information per the viewpoint of the user [Okada, abstract].

Claims 7 and 15:

The combination of Ozbutun and Okada discloses the elements of claims 1 and 11 as noted above.

The combination of Ozbutun and Okada discloses wherein the coding data produced from one integer list are stored in at least one file allocated to said one integer list [Okada, Fig 4 and col 6, lines 44-50].

Claims 8 and 14:

The combination of Ozbutun and Okada discloses the elements of claims 1, 7 and 11 as noted above.

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The combination of Ozbutun and Okada fails to disclose wherein the coding data are stored in first and second files having a common addressing, whereby for each subset containing at least one integer of the input list, the data representing the position of said subset in the pattern are stored in the first file and the data representing the position of each integer of the input list within said subset are stored at a corresponding address in the second file.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

Okada discloses assigning bitmap data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to include wherein the coding data are stored in first and second files having a common addressing, whereby for each subset containing at least one integer of the input list, the data representing the position of said subset in the pattern are stored in the first file and the data representing the position of each integer of the input list within said subset are stored at a corresponding address in the second file.

The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of creating a basic unit of storage that enables a computer to access both the first file and the second file simultaneously.

Claim 19:

Ozbutun discloses the elements of claims 11 and 18 as noted above.

Ozbutun fails to disclose wherein each record of the layer n data container associated with a layer n rank further has a second field for containing said layer n rank.



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However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b].

Okada discloses assigning data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to include wherein each record of the layer n data container associated with a layer n rank further has a second field for containing said layer n rank.

The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of controlling information per the viewpoint of the user [Okada, abstract].

Claim 22:

Ozbutun discloses the elements of claims 11 and 18-21 as noted above.

Ozbutun fails to disclose wherein each data container comprises at least two files where the first and second fields of the records of said data container are respectively stored, said files being accessible separately.

Okada discloses assigning data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to include wherein each data container comprises at least two files where the first and second fields of the records of said data container are respectively stored, said files being accessible separately.

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The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of controlling information per the viewpoint of the user [Okada, abstract].

Claim 25:

Ozbutun discloses the elements of claims 11, 18 and 23 as noted above.

Ozbutun fails to disclose wherein each layer  $k$  data container for  $1 < k < n$  comprises at least two files where the first and second fields of the records of said data container are respectively stored, said files being accessible separately.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b] and Okada discloses assigning data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to include wherein each layer  $k$  data container for  $1 < k < n$  comprises at least two files where the first and second fields of the records of said data container are respectively stored, said files being accessible separately.

The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of controlling information per the viewpoint of the user [Okada, abstract].

Claim 27:

Ozbutun discloses the elements of claims 11, 18 and 26 as noted above.

Ozbutun fails to disclose wherein, for  $1 < k < n$ , said layer 1 input lists are respectively associated with record chains in the layer  $k$  data container, whereby the coding data relating to

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one of said layer 1 input lists for layer k are stored in or retrievable from the record chain associated therewith in the layer k data container.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b] and Okada discloses assigning data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to include wherein, for  $1 < k < n$ , said layer 1 input lists are respectively associated with record chains in the layer k data container, whereby the coding data relating to one of said layer 1 input lists for layer k are stored in or retrievable from the record chain associated therewith in the layer k data container.

The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of controlling information per the viewpoint of the user [Okada, abstract].

Claim 28:

Ozbutun discloses the elements of claims 11, 18 and 26 as noted above.

Ozbutun fails to disclose wherein, for  $1 < k < n$ , each record of the layer k data container further has a head address field for pointing to an address of a first record of a respective chain in the layer k-1 data container.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b] and Okada discloses assigning data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to include wherein, for  $1 < k < n$ , each record of the layer  $k$  data container further has a head address field for pointing to an address of a first record of a respective chain in the layer  $k-1$  data container.

The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of controlling information per the viewpoint of the user [Okada, abstract]

Claim 29:

Ozbutun discloses the elements of claims 11, 18 and 26 as noted above.

Ozbutun fails to disclose wherein each layer  $k$  data container for  $1 < k < n$  comprises at least two files where the first fields and the next address fields of the records of said data container are respectively stored, said files being accessible separately.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b] and Okada discloses assigning data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to include wherein each layer  $k$  data container for  $1 < k < n$  comprises at least two files where the first fields and the next address fields of the records of said data container are respectively stored, said files being accessible separately.

The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of controlling information per the viewpoint of the user [Okada, abstract].

Art Unit: 2171

Claim 30:

Ozbutun discloses the elements of claims 11, 18 and 26 as noted above.

Ozbutun fails to disclose further comprising the step of grouping the records of the data container for each coding layer, so that the records of each chain have contiguous addresses.

However, Ozbutun discloses creation of segmented bitmaps [col 5, line 23 through col 6, line 39, Fig 3a, Fig 3b] and Okada discloses assigning data to the field of a file [Fig 4 and col 6, lines 44-50].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ozbutun and Okada to include further comprising the step of grouping the records of the data container for each coding layer, so that the records of each chain have contiguous addresses.

The ordinarily skilled artisan would have been motivated to modify the combination of Ozbutun and Okada per the above for the purpose of controlling information per the viewpoint of the user [Okada, abstract].

Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozbutun in view of Pub No US 2003/0167373 issued to Winters et al.

Claims 10 and 13:

Ozbutun discloses the elements of claims 1, 9 and 11 as noted above.

Ozbutun fails to disclose wherein said number of integers is a whole power of 2.

Winters discloses what is well-known and expected in the art i.e., wherein said numbers is a whole power of 2 [paragraph 8].

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ozbutun to include wherein said number of integers is a whole power of 2.

The ordinarily skilled artisan would have been motivated to modify Ozbutun per the above for the purpose providing the standard format for memory organization.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne LeRoux whose telephone number is (703) 305-0620. The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Patent related correspondence can be forwarded via the following FAX number (703) 872-9306

Etienne LeRoux

April 27, 2004

